| AMENDMENT OF SOLIC | | ATION OF | 1. CONTRACT I D CODE | PAGE OF PAGE | | | |
|---|--|---|--|--|--|--|--|
| co | NTRACT | | | 1 9 | | | |
| 2. AMENDMENT/MOD NO. | 3. EFFECTIVE DATE | 4. REQUISITION/F | PURCHASE REQ. NO. | 5. PROJECT NO | | | |
| 02 | See Block 16c | | | | | | |
| 6. ISSUED BY NASA Johnson Space Center | | 7. ADMINISTERED I | BY CODE | JSC | | | |
| Attn: Maria Alberty/BJ3 2101 NASA Parkway Houston, TX 77058-3696 | | NASA Johnson Space Center 2101 NASA Parkway, Attn: Maria Alberty/BJ3 Houston, TX 77058-3696 | | | | | |
| 8. NAME AND ADDRESS OF CONTRAC | TOR (No. Street, County, 3 | | (9) 9A. AMENDMENT C NO NNJ092 | | | | |
| Prospective Contractors | | | 9B. DATED (SEE IT) 5/26 | 5/09 | | | |
| | | | (10) 10A, MOD. OF CON | TRACT/ORDER N | | | |
| CODE | FACILITY CO | DE | 10B. DATED (SEE I | TEM 13) | | | |
| 11. 7 | HIS ITEM ONLY APPLIES | TO AMENDMENTS C | LL DF SOLICITATIONS | *************************************** | | | |
| The above numbered solicitation is amended a Offers must acknowledge receipt of this amen- methods: | as set forth in Item 14. The ho | our and date specified for | receipt of Offers IS NOT exter | nded. f the following | | | |
| (a) By completing Items 8 and 15, and retu (b) By acknowledging receipt of this amend (c) By separate letter or telegram which ind ACKNOWLEDGMENT TO BE RECEIVED SPECIFIED MAY RESULT IN REJECTION change may be made by telegram or letter prior to the opening hour and date specifie | N OF YOUR OFFER. If by viri to provided each telegram or le | D FOR THE RECEIPT C |)F OFFERS PRIOR TO THE F II desire to change an offer alr | HOUR AND DATE | | | |
| 12. ACCOUNTING AND APPROPRIATIO | N DATA (if required) | T-11-11-11-11-11-11-11-11-11-11-11-11-11 | | *************************************** | | | |
| | | | Financial Manager | rient | | | |
| 13. THIS ITEM APPLIES ONLY TO MOD CONTRACT/ORDER NO. AS DESCR | IFICATIONS OF CONTRA | CTS/ORDERS, IT MO | DIFIES THE | CONTROL OF THE SECTION AND ADDRESS AND ADD | | | |
| A. THIS CHANGE ORDER IS ISSUED I CONTRACT ORDER NO. IN ITEM 10A. | PURSUANT TO: (Specify aut | hority) THE CHANGES | SET FORTH IN ITEM 14 ARE | MADE IN THE | | | |
| B. THE ABOVE NUMBERED CONTRAGORIGE, appropriation date, etc.) SET FOR | CT/ORDER IS MODIFIED TO RTH IN ITEM 14, PURSUANT | REFLECT THE ADMINIS TO THE AUTHORITY O | STRATIVE CHANGES (such a F FAR 43.103(b). | ns changes in paying | | | |
| C. THIS SUPPLEMENTAL AGREEMEN | IT IS ENTERED INTO PURSU | JANT TO AUTHORITY O | F: | | | | |
| D. OTHER (Specify type of modification | and authority) | | | | | | |
| IMPORTANT: Contractor | IS required to sign this do | cument and return 1 co | opies to the issuing office. | | | | |
| 14. DESCRIPTION OF AMENDMENT/MC | | | | ontract subject | | | |
| matter where feasible.) The purpose of Amendment 02 is t | o answer questions su | bmitted in response | e to the solicitation. A | all other terms | | | |
| and conditions of the IFB remain u | nchanged. | | | | | | |
| Except as provided herein, all terms and of | conditions of the document | referenced in Item 9A | or 10A, as heretofore char | nged, remains | | | |
| unchanged and in full force and effect. 15A. NAME AND TITLE OF SIGNER (7) | pe or print) | | LE OF CONTRACTING O | | | | |
| 15B. CONTRACTOR/OFFEROR | 15C. DATE SIGNED | 16B. UNITED STATE | | C. DATE SIGNED | | | |
| (Signature of person authorized to sign) | | (Signature Of Contracting Officer) 6/23/09 | | | | | |
| NSN 7540-01-152-8070 PREVIOUS EDITION UNUSABLE | 30 | -105 | S' | TANDARD FORM 30 (REV 10-83) ES 10-83 FAR (48 CFR | | | |
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Official Responses to Questions Submitted for

Upgrade Auxiliary Chiller Plant, Building 28 Solicitation NNJ09233335E

Disclaimer: The questions submitted in this document were reproduced exactly as submitted.

| Question 1: | uable to find the drawing concern the this bldg 8 (ibf file) |
|-------------|--|
| Response 1: | Specifications and Drawings for this project may be found at the locations identified in the IFB in Section "L.26 Availability of Specifications and Drawings." The IFB and any amendments can be viewed on the NAIS website at http://prod.nais.nasa.gov/cgi-bin/eps/sol.cgi?acqid=134993 as well as the project specific website at http://procurement.jsc.nasa.gov/uacp |
| Question 2: | We are confused as to whether we can bid this \$5-10 mil.budget job? We are suffering as much as any small contractor at this point and we would really like to bid this job. |
| Response 2: | The Government presumes that the question is whether businesses are precluded based upon business size. This procurement is not set aside for small businesses, therefore any sized/socioeconomic business can submit a bid. |
| Question 3: | Can you verify that the above project is procured as Unrestricted and not set-aside? |
| Response 3: | Yes. See Response 2. |
| Question 4: | Is there a way I can get a set of MEP plans and specs? |
| Response 4: | Yes. See Response 1. |
| Question 5: | Hi, are boilers part of the scope of the project? |
| Response 5: | No. |
| Question 6: | Yes could I please get a bidders list for this project. We are a speciality sub contractor that works at this site and would like to see if there would be any opportunites for us. |
| Response 6: | Yes. An Interested Parties List and a Pre-Bid Attendees List are available on the NAIS website as well as the project specific website. |
| Question 7: | If this plant will require new preinsulated pipe to a district chilled water distribution system, please send an invite or electronic plan set and specs so Thermacor can prepare budget pricing for mechanical contractors. Please call with any questions |
| Response 7: | Contractors are encouraged to view the IFB at the NAIS and project specific websites. See |

| | Response 1. |
|--------------|--|
| Question 8: | Do you think the current bid of June 22nd will hold or be pushed back? Is the current bid date still June 22nd? |
| Response 8: | Bids are due on July 1, 2009 by 2 PM local time as stated in the IFB on the form SF 1442. |
| Question 9: | How may we proceed with receiving bid documents and plans for this project? |
| Response 9: | See Response 1. |
| Question 10: | Is there a mandatory pre-bid meeting? |
| Response 10: | No. A Pre-Bid was held on June 3 from 1-3 PM local time. As stated in the IFB in Section L.19 "52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995) - ALTERNATE I (FEB 1995)," Attendance at the pre-bid/site visit is recommended; however, attendance is neither required nor a prerequisite for bid submission. |
| Question 11: | Please provide information on how to submit a RFI for this project? |
| Response 11: | Requests for Information (RFI) are not being requested for this project. This project is being awarded pursuant to an Invitation for Bid (IFB). If interested in submitting a bid, See Response 1. |
| Question 12: | Please advise contact information regarding questions to specifications |
| Response 12: | Questions pertaining to the specifications and any other IFB documents were due by June 12, 2009. The Government does not intend to answer any remaining questions received after this due date. |
| Question 13: | I understand that we will be expanding building 28 north of the existing bldg, but I noticed that there is construction underway with orange fencing barricading the construction activities that are presently underway. Will this work that is being performed be complete once we start work or will we have to coordinate with them? |
| Response 13: | The construction noted above that is currently under way will be completed before this project starts. |
| Question 14: | We would like to know if its possible to received a copy of the attendees for yesterdays site visit for Sol. NNJ09283335E Upgrade of Auxiliary Chiller Plant, Bldg. 28 |
| Response 14: | Yes. See Response 6. |
| Question 15: | Can we get a copy of the drawings and specifications electronically? |
| Response 15: | No. Drawings and Specifications are not available electronically. See Response 1. |
| Question 16: | I am unclear as to whether my contractors are bidding to a GC, or in general, how they can put in a bid for the floor coating section of this project. Can you give me any guidance? |
| Response 16: | The Government encourages contractors to communicate with other contractors to pursue |

| | subcontract opportunities. |
|--------------|---|
| | Subcontract Opportunities. |
| | The Government will only consider and evaluate those responsible bids that are submitted by the due date identified in the IFB. Per Section M. 1 "52.214-19 CONTRACT AWARD - SEALED BIDDING - CONSTRUCTION. (AUG 1996)," "The Government will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the Government, considering only price and the price-related factors specified elsewhere in the solicitation." |
| | Subcontract bids that do not meet all the requirements of the solicitation will not be evaluated. |
| | If interested in submitting a bid, See Response 1. |
| Question 17: | Please confirm that the Time Period to submit questions concerning this project has been extended from 6/5/09 to 6/10/09 per para L. 19 52.236-27 |
| Response 17: | See Response 12. |
| Question 18: | Per para L.26 (Availability of Spec's and Dwg's), documents are available at Ridgeway's and the plan rooms, but may we also obtain "soft" copy on CD or DVD? |
| Response 18: | No. See Response 15. |
| Question 19: | Referencing Section 01 33 00 and 23 64 00.00 10, paragraph 1.2 |
| | We are unable to comply with the submittal requirements exactly as currently written. Is our submittal procedure as provided with the existing chillers acceptable? Please see attached example transmittal document, which shows the table to contents of our submittals. Will you confirm this is acceptable? |
| Response 19: | The Government will not comment or evaluate proposals/ submittals at this time. The Government will only consider and evaluate those responsible bids that meet the minimum requirements and are submitted by the due date identified in the IFB. Per Section L.6 "52.214-18 PREPARATION OF BIDS - CONSTRUCTION. (APR 1984)," "d) Alternate bids will not be considered unless this solicitation authorizes their submission." |
| Question 20: | Referencing Section 23 64 00.00 10, paragraph 1.5.3 and 2.5.6.16 |
| | Paragraph 1.5.3 Appears to require that a list of chiller spare parts are to be provide with chiller submittal, but not to actually provide any spare parts. Paragraph 2.5.6.16 appears to require that VFD spare parts be provided. Is it intended for spare parts to be included in the quote only for the VFD? Chiller also? Or neither? |
| Response 20: | A list of spare parts for the chiller and the VFD are required per the specifications. |
| Question 21: | Reserved. |
| Response 21: | Reserved. |
| Question 22: | Referencing Section 23 64 00.00 10, paragraph 2.5.12 |
| | |

| | ARI Standard 540 should be 740 for Refrigerant Transfer Unit. Will you confirm the corrected ARI Standard 740 is acceptable? | | | | | | | | |
|--------------|---|--|--|--|--|--|--|--|--|
| Response 22: | ARI Standard 540 is a typo and should read ARI Standard 740. A revised specification Section 23 64 00.00 10 is provided with this amendment that reflects this change (a new section had to be reprinted due to page number changes). | | | | | | | | |
| Question 23: | Referencing Section 23 64 00.00 10, paragraph 2.4.1. | | | | | | | | |
| | NEMA 1 specified here, but NEMA 12 in paragraph 2.5.6.4. Which is correct? | | | | | | | | |
| Response 23: | NEMA 1 is a typo and should read NEMA 12. A revised specification Section 23 64 00.00 10 is provided with this amendment that reflects this change (a new section had to be reprinted due to page number changes). | | | | | | | | |
| Question 24: | Referencing Section 23 64 00.00 10, paragraph 2.5 | | | | | | | | |
| | Spring isolators were not provided on the existing chillers. Is this now a requirement? Or should we match existing installation? | | | | | | | | |
| Response 24: | No. Spring isolators are not required. | | | | | | | | |
| Question 25: | Referencing Section 23 64 00.00 10, paragraph 2.5.5.5 | | | | | | | | |
| | Surge protection is provided by the VFD, so is not applicable to the motor as damage could occur. Will you confirm this is acceptable? | | | | | | | | |
| Response 25: | See Response 19. | | | | | | | | |
| Question 26: | Referencing Section 23 64 00.00 10, paragraph 2.5.5.6 | | | | | | | | |
| | Current transformers and unbalance protection are provided in the VFD, not in the motor. Will you confirm this is acceptable? | | | | | | | | |
| Response 26: | See Response 19. | | | | | | | | |
| Question 27: | Referencing Section 23 64 00.00 10, paragraph 2.5.6.1 | | | | | | | | |
| | The Titan OM compressor is a variable torque load; reference to constant torque is N/A. Will | | | | | | | | |
| | you confirm this is acceptable? | | | | | | | | |
| Response 27: | See Response 19. | | | | | | | | |
| Question 28: | Referencing Section 23 64 00.00 10, paragraph 2.5.6.2 | | | | | | | | |
| | Most qualified and viable VFD manufacturers do not offer the Failed Switch Bypass/Ride- Through capability. Can this requirement be deleted or relaxed? Please advise if additional information is desired in consideration of this. | | | | | | | | |
| Response 28: | Fail Switch Bypass/Ride Through capability is not required. A revised specification Section 23 64 00.00 10 is provided with this amendment that reflects this change (a new section had to | | | | | | | | |

| | be reprinted due to page number changes). |
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| Question 29: | Referencing Section 23 64 00.00 10, paragraph 2.5.6.6 |
| | What is the communication protocol? |
| Response 29: | The new chiller PLC shall communicate with the existing Building 28 PLC's via the existing Allan Bradley Data Highway Plus and shall contain an Ethernet card to communicate with the existing Honeywell EBI via the existing JSC LAN. A revised specification Section 23 64 00.00 10 is provided with this amendment that reflects this change (a new section had to be reprinted due to page number changes). |
| Question 30: | Referencing Section 23 64 00.00 10, paragraph 2.5.6.8 |
| | Switchgear not required by JCI. VFD will have Circuit Breaker or Fused Disconnect. Will you confirm this is acceptable? |
| Response 31: | See Response 19. |
| Question 32: | Referencing Section 23 64 00.00 10, paragraph 2.5.7 |
| | Water side is exempt from ASME code, and will not be stamped unless required. Is this acceptable or is a stamp desired/required on the water side? |
| Response 32: | Stamp desired/required on the water side per the specifications. |
| Question 33: | Referencing Section 23 64 00.00 10, paragraph 2.5.11 |
| | Intercooler level control valve is external. There is no low pressure float valve. Will you confirm this is acceptable? |
| Response 33: | See Response 19. |
| Question 34: | Referencing Section 23 64 00.00 10, paragraph 2.5.13 |
| | The PLC5/20 is not a current product from Allen-Bradley with the lifespan appropriate for the Titan chiller product. Therefore, our current offering is ControlLogix L61 5000 series processor (PLC5/20 is obsolete) and associated 1756 I/O system to best serve the longevity of the Titan product. Will you confirm this is acceptable? |
| Response 34: | See Response 19. |
| Question 35: | Referencing Section 23 64 00.00 10, paragraph 2.5.13 |
| | The Panelview 1000 is inadequate in memory capacity to handle all the required display and control screens required for the Titan product. Therefore, our current display offering is PanelView Plus 1250 (PanelView 1000 is obsolete). Allen-Bradley Panelview Plus 1250 as a superior product. Will you confirm this is acceptable? |
| Response 35: | See Response 19. |

| Question 36: | Referencing Section 23 64 00.00 10, paragraph 2.5.13 |
|--------------|---|
| | Panel enclosure access has been upgraded to front access to aid in installation and troubleshooting. Will you confirm this is acceptable? |
| Response 36: | See Response 19. |
| Question 37: | Referencing Section 23 64 00.00 10, paragraph 2.5.13.2 |
| | The I/O list in the specification is out of date for the proposed machinery. A current I/O list can be provided along with quotation, or earlier if desired. Will you confirm this is acceptable? |
| Response 37: | I/O list indicated in the specifications and on sheet M-28-64 of the contract documents shall be provided as a minimum requirement. Additional I/O points may be provided at the manufacturer discretion. |
| Question 38: | Referencing Section 23 64 00.00 10, paragraph 2.5.13 (last paragraph) |
| | We require only 5 kVA for control power. Will you confirm this lower power requirement is acceptable? |
| Response 38: | See Response 19. |
| Question 39: | Referencing Section 23 64 00.00 10, paragraph 2.5.14 |
| | We offer the Allen-Bradley XM-162 vibration monitoring system as a superior condition monitoring platform. The Allen-Bradley XM platform is a small form factor and uses Bently 3300 probes and proximitors. It also easily integrates into the Allen-Bradley PLC system. The Bently 1701 Fieldmonitor is slated for obsolesce, and would not serve the lifespan of the Titan chiller. Will you confirm this is acceptable? |
| Response 39: | See Response 19. |
| Question 40: | Referencing Section 23 09 12, paragraph 2.2.3.2 |
| | This paragraph lists approved vendors for transmitters, which does not include Ashcroft However, Ashcroft is listed in Section 23 64 00.00 10, paragraph 2.5.13.1. Is Ashcroft acceptable? |
| Response 40: | See Response 19. |
| Question 41: | Referencing Section 23 09 12, paragraph 2.2.5.2 |
| | We request approval to offer ITT Neo-Dyn Differential Pressure Switch. Reliability problems have been identified with Ashcroft model switches. JCI recommends ITT Neo-Dyn as the proper device for this application. Will you confirm this is acceptable? |
| Response 41: | See Response 19. |
| Question 42: | Referencing Section 23 09 12, paragraph 3.1.3.3 |

| | Poor reliability issues have been identified with placing a temperature switch in the compressor discharge line. The functionality of high compressor discharge temperature will be performed by a temperature transmitter associated with a TAHH high temperature shutdown safety. Will you confirm this is acceptable? |
|--------------|--|
| Response 42: | See Response 19. |
| Question 43: | Referencing Section 23 09 12, paragraph 3.1.3.3 Low Evaporator Pressure switches are not necessary and cause reliability issues. This functionality will be performed by the evaporator pressure transmitter associated with a PALL low pressure shutdown safety. No physical switch is provided. Will you confirm this is acceptable? |
| Response 43: | See Response 19. |
| Question 44: | Referencing Section 23 09 12, paragraph 3.1.3.3 Low Refrigerant Temperature switches are not necessary and cause reliability issues. T his functionality will be performed by the evaporator temperature transmitter associated with a TALL low temperature shutdown safety. No physical switch is provided. Will you confirm this is acceptable? |
| Response 44: | See Response 19. |
| Question 45: | Electrical Drawings E-28-11 and E-28-61 appear to indicate provision of a new transformer (tag T-28-6) with the sole purpose of stepping down the 12.47 KV to 4.16 KV and only feeds the new 4.16 KV VFD (tag MVC-28-4/VFD) for the new chiller. If so, may we propose a more economical and energy efficient method for accomplishing this? The VFD will have an integral input isolation transformer. This transformer could be provided with step-down functionality such that the VFD input power would be 12.47 KV and the output power 4.16 KV. The VFD cabinet size would increase somewhat, but the space currently allocated for the new transformer would be eliminated. Providing stepdown functionality integral to the VFD would eliminate the need for the new additional transformer and the electrical inefficiencies associated. Will you confirm this is acceptable? |
| Response 45: | See Response 19. |
| Question 46: | Can we get the name of the manufacturer who provided the original PEAF panels on the Chiller Facility? |
| Response 46: | No. The manufacturer name is not available. |
| Question 47: | In the extension of the crane beams who is furnishing, installing and aligning the crane rail? |
| Response 47: | The Contractor is responsible per the specifications. |
| Question 48: | In regards to the epoxy floor coating, can it be identified where the different colors will be required? |

| Response 48: | The Government will select the new epoxy floor paint color from the manufacturer's standard |
|--------------|---|
| · | color range. Only one color will be used throughout the concrete floors, curbs and |
| | housekeeping pads per the specifications. |
| Question 49: | What type of connection will be required at the existing to new crane beam? |
| Response 49: | The type of connection is referred on detail Section 5 on Sheet s-28-51. |
| Question 50: | Is there any way that the drawings and specifications, are going to be released electronically? |
| Response 51: | See Response 15. |
| Question 51: | The extension of the existing bridge crane, we do not have any specifications. Are we going to get specs for the bridge crane? |
| Response 51: | The bridge crane is not being modified. The crane rail is being extended to the new section of the building per the specifications and referenced on structural drawing plans S-28-11 and |
| | details on S-28-51 and electrical drawing sheets ED-28-11 and E-28-11. |
| Question 52: | The replacement of the VCT, there are no specs indicating what type of VCT to use. |
| Response 52: | The Contractor shall replace the VCT per the specification by removing existing VCT and |
| | resilient base in Control Room 101 per sheet ad-28-11 and preparing the existing concrete |
| | subfloor as required by the new VCT manufacturer's installation and warranty requirements. |
| Question 53: | There are no paint specs for interior steel frames, steel deck, and steel beam truck extension. |
| | Please provide specifications? |
| Response 53: | A painting and coating specification has been issued under specification Section 09 90 00.00 40. |
| Question 54: | Is the requirement for a Safety and Health System Specialist correct? |
| Response 54: | No, the specification has been modified for this project size. A revised specification Section 01 |
| • | 41 00.00 80 is provided with this amendment that reflects this change. |
| Question 55: | Is the motor size and electrical service correct for the cooling tower fan motor? |
| Response 55: | No, the sizing has been corrected. Revised sketches, which identifies the material to be replaced, are provided with this amendment. |

| | | | | | | COOI | LING | TOWE | R SC | HEDU | JLE | |
|-------------------|-----------------------------|--|-------|-------------------------------|-----|-----------|------------------|-------|------|------|-----------------------------|------|
| MARK NUMBER | TOTAL CAPACITY (TONS) | AMBIENT DB/WB TEMP (DEG F/DEG F) | FLOW | SER WATER E W T (DEG G) | LWT | QUANILLIY | AIRFLOW (CFM) | | V/P | # | BASIS OF DESIGN | NOTE |
| CT-28-3 | 2000 | 95/80 | 6,500 | 96 | 86 | 1 | $ \mathcal{I} $ | 125.0 | 48 | /3 | COMPOSITE COOLING SOLUTIONS | 1 |
| OTES: FIELD ER | ECTED CONCRE | ETE COOLING TOW | ER. | L | | | - | | / | | | |

HX

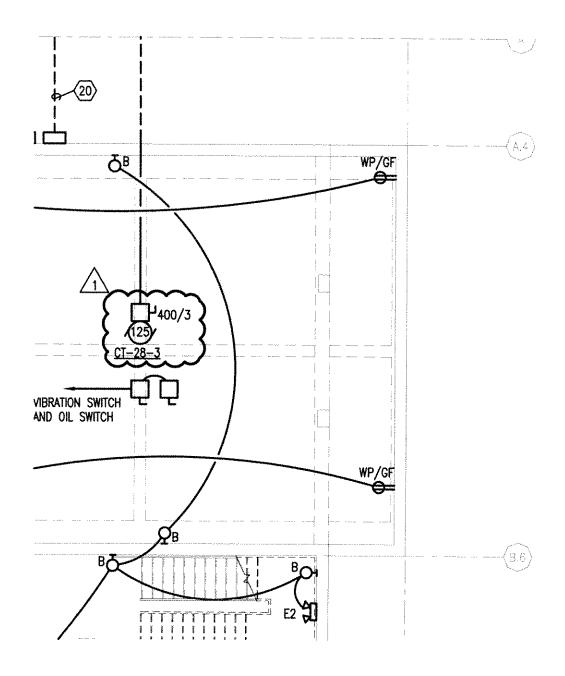
NASA BUILDING 28
UPGRADE OF AUXILLARY CHILLER PLANT

Sheet Yille

MECHANICAL SCHEDULES

Contract Number
NNJ07JA05B
Project Number
428366 — 89533
Project Manager
DENNIS PATRICK
Date
06-19-09

Task Order Number
NNJ07JH22T
Reference Sheet
M-28-61
Reference Document
ADDENDUM #1
Sketch Number
SKM-28-61.1



HDR

Project Title NASA BUILDING 28 UPGRADE OF AUXILLARY CHILLER PLANT

Sheet Title

FIRST LEVEL ELECTRICAL PLAN - AUX. PLANT BUILDING

Contract Number NNJ07JA05B

Project Number 428366 — 89533

Project Manager

Dennis Patrick

06/19/09

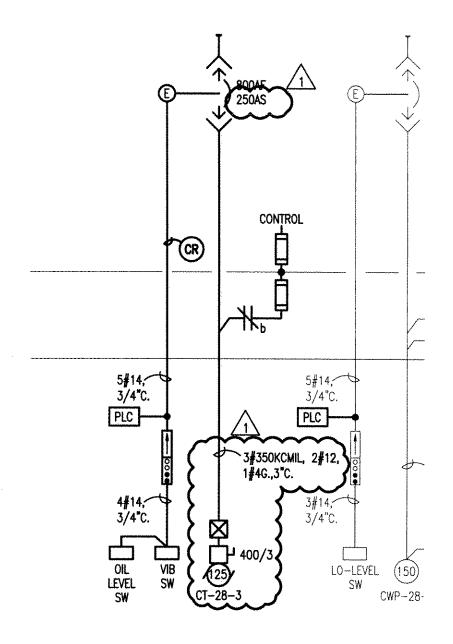
Task Order Number
NNJ07JH22T

Reference Sheet
E-28-11

Reference Document
SKE-28-11.1

Sketch Number

ADDENDUM #1



HR

Project Title NASA BUILDING 28
UPGRADE OF AUXILLARY CHILLER PLANT

Sheet Title

EXISTING ELECTRICAL ONE-LINE DIAGRAMS

NNJ07JA05B

Project Number
428366 — 89533

Project Manager
Dennis Patrick

Date
06/19/09

Contract Number

Teak Order Number
NNJ07JH22T

Reference Sheet
E-28-61

Reference Document
SKE-28-61.1

Skatch Number
ADDENDUM #1